R E P O R T R E S U M E S

ED 013 480 EA 000 594

A MODEL FOR SHARED DECISION MAKING IN THE SCHOOL PRINCIPALSHIP.

BY- BRIDGES, EDWIN M.
CENTRAL MIDWESTERN REGIONAL EDUC. LAB., ST. ANN,MO

REPORT NUMBER CEMREL-OP-NO-2-1967 PUB DATE 67
CONTRACT OEC-3-6-001507-1507
EDRS PRICE MF-$0.25 HC-$0.64 16P.

DESCRIPTORS- *PRINCIPALS, *TEACHERS, *DECISION MAKING, *TEACHER PARTICIPATION, LEADERSHIP, *TEACHER ADMINISTRATOR RELATIONSHIP, ADMINISTRATIVE POLICY, SCHOOL SYSTEMS, ST. ANN,

RESEARCH SUGGESTS THAT TEACHER PARTICIPATION IN DECISIONMAKING HAS DESIRABLE CONSEQUENCES. WHEN THE PRINCIPAL INVOLVES TEACHERS IN MAKING DECISIONS WHICH ARE LOCATED IN THEIR ZONE OF INDIFFERENCE, PARTICIPATION IS LESS EFFECTIVE. A TEACHER IS INTERESTED IN PARTICIPATING IF THE DECISION IS RELEVANT TO HIM AND IF HE IS CAPABLE OF CONTRIBUTING TO THE DECISION. WHEN THE PRINCIPAL HAS DECIDED AT WHAT PHASE IN THE DECISIONMAKING PROCESS TEACHERS WILL BE INCLUDED AND WHAT THEIR ROLE WILL BE, HE MUST DETERMINE THE CONSTITUTIONAL ARRANGEMENT OF THE GROUP (PARTICIPANT-DETERMINING, PARLIAMENTARIAN, OR DEMOCRATIC-CENTRALIST). DECISIONS APPROPRIATE FOR PARTICIPANT-DETERMINING HOLD HIGH RELEVANCE TO THE TEACHERS. WHEN TEACHERS' INTERESTS ARE CONFLICTING, THE PARLIAMENTARIAN STYLE IS MOST APPROPRIATE FOR ACHIEVING CONSENSUS, AND WHEN BOTH TEACHERS' VIEWS AND THE PRINCIPAL'S FINAL JUDGMENT ARE REQUIRED, THE DEMOCRATIC-CENTRALIST STYLE IS MOST FEASIBLE. IN ALL THREE STRUCTURES, THE PRINCIPAL MUST FACILITATE THE GROUP EFFORT IN ORDER TO MAINTAIN THE NECESSARY LEADERSHIP POSITION. (HM)

ED013480

OCCASIONAL PAPER SERIES

NUMBER 2
1967

cemrel

CENTRAL MIDWESTERN REGIONAL EDUCATIONAL LABORATORY

A MODEL FOR SHARED DECISION MAKING IN THE SCHOOL PRINCIPALSHIP

by

EDWIN M. BRIDGES

GRADUATE INSTITUTE OF EDUCATION
WASHINGTON UNIVERSITY

FOR EDUCATIONAL

RESEARCH
INNOVATION
DIFFUSION
IMPLEMENTATION

EA 000 594
Copy 1

A MODEL FOR SHARED DECISION MAKING IN THE SCHOOL PRINCIPALSHIP

by

Edwin M. Bridges
Graduate Institute of Education
Washington University

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

OCCASIONAL PAPER SERIES
Number 2
1967

The work reported herein was performed pursuant to Contract No. OEC 3-6-001507-1507 with the United States Department of Health, Education, and Welfare, Office of Education.

Central Midwestern Regional Educational Laboratory, Inc.
10646 St. Charles Rock Road
St. Ann, Missouri 63074

A MODEL FOR SHARED DECISION MAKING IN THE SCHOOL PRINCIPALSHIP*

Edwin M. Bridges

Graduate Institute of Education
Washington University

Of the myriad activities in which the principal engages, his conscious involvement of teachers in making decisions is one of the most crucial. This is not to imply that his other administrative acts--e.g., planning, organizing, controlling, and evaluating--are not important, only that they are no more important to the functioning of the school than the provision for his subordinates to participate in the decision-making process. Empirical support for this contention can be found in research on two types of organizations, "business concerns" and "service organizations."

For example, a field experiment conducted by Coch and French[1] in an industrial setting shows quite dramatically the effects of employee participation on absenteeism, turnover, efficiency, productivity, and incidence of grievances. According to the authors, the Harwood Manufacturing Corporation which provided the setting for this study was a progressive business concern in the area of labor relations. Employees were provided with music while they worked, health services, lunchrooms, and recreation programs. Nevertheless, the production workers resisted necessary changes in their methods and jobs even when they realized that competitive conditions required these changes. In an effort to increase productivity and to reduce turnover, Coch and French with management's approval used different degrees of participation in initiating required changes. One group of employees was given *no opportunity to participate* though the need for change was pointed out to them. The second group of workers was treated with *participation through representation* in designing the changes to be made in their jobs. In the third group, there was *total participation;* all members were involved in designing the changes. The results of this experiment favored the representation group and the total participation groups. At the end of the first forty days, 17% of the no-participation group had quit; there was no turn-over in the groups experiencing some form of participation.

---

*This article was written while the author was serving as a Senior Research Associate in the Central Midwestern Regional Educational Laboratory (CEMREL).

As for the productivity of the various groups, the no-participation group showed no progress after transfer for a period of thirty-two days. At the end of fourteen days, the *representation and total participation* groups impressively exceeded the standard set by management. The no-participation group was reconstituted two and a half months after the completion of the experiment and transferred to a new job using the total participation technique. This group, like the representation and the total participation groups in the first experiment, *re-learned the new job rapidly and attained a level of production much higher than had existed before the change*. Similar results favoring employee participation in decision-making have been reported by Guest,[2] Vroom,[3] Maier,[4] and Wickert.[5]

However, since these studies were conducted within business concerns, the generalizability of the results to school organizations with professional employees may be questioned. One might argue that participation would have less of an impact on teachers than on industrial workers because the opportunity to participate would provide less of an increase in status for teachers than for industrial workers. On the other hand, one might argue that the autonomy expectation is more deeply ingrained in the professional than in the factory worker and that for the teacher to be denied a share in decision making would have more disastrous consequences than it would for the non-professional. The research on this question suggests that participation by teachers in decision making does produce positive consequences. Chase's study of 1800 teachers in 216 systems in forty-three states underscores this point: *"Teachers who report opportunity to participate regularly and actively in making policies are much more likely to be enthusiastic about their school systems than those who report limited opportunity to participate."*[6] The opportunity to share in formulating policies apparently is an important factor in the morale of teachers and their enthusiasm for the school system. In a similar study of 500 teachers from all parts of the United States, Sharma[7] examined how practices in decision making were related to an individual's satisfaction in teaching. The data indicated rather clearly that teachers' satisfaction was related directly to the extent that they participated in decision making. Further support for the autonomy expectation argument is advanced by Bridges' study of teacher participation in decision making.[8] Bridges found that teachers preferred principals who involved their staffs in decision making and that this was true regardless of whether the teachers had a high or low need for independence. Taken together these three studies conducted in educational settings lend weight to the position that participation does increase a teacher's level of satisfaction in teaching, a teacher's enthusiasm for the school system where he works, and a teacher's positive attitudes toward the principal.

Having documented the assertion that employee participation in decision making has many desirable consequences, the author will review the administrative theory and research which bear on these issues:

1. Under what conditions should the principal seek to share decision making with his staff?

2. In what phases of the decision-making process should teachers be involved and what role should they play?

3. How should the decision-making group be constituted?

4. What role should the principal assume if he wishes to facilitate the group decision-making process?

CONDITIONS CONDUCIVE TO EFFECTIVE PARTICIPATION

Each time that a principal is faced with a decision it is not an occasion for shared decision making. Unfortunately, many principals do not realize this any endeavor to involve their staffs in making decisions whenever a problem arises which needs to be resolved. Both Chase[9] and Bridges[10] noted this in their studies of participation. They found that teachers expressed resentment toward excessive committee work, attendance at meetings, and being consulted on decisions which they felt the principal was paid to make. Subordinates, as Barnard has pointed out, do have a "zone of indifference" within which an administrator's decisions will be accepted unquestionably;[11] for the administrator to seek involvement within this zone of indifference is to court resentment, ill will, and opposition. Two basic propositions then are suggested by the work of Barnard, Chase, and Bridges:

1. As the principal involves teachers in making decisions located in their zone of indifference, participation will be less effective.

2. As the principal involves teachers in making decisions clearly located outside their zone of indifference, participation will be more effective.

The problem for the principal becomes one of distinguishing those decisions which clearly fall within his teachers' zone of indifference from those which do not.

Decisions which clearly fall outside the teachers' zone of indifference are those which have consequences for them; this becomes more pronounced as the magnitude of these consequences increases.[12] Therefore, when the teachers' personal stakes in the decision are high, their interest in participation should also be high. Decisions of this type are those which deal primarily with the teachers' own classroom affairs, e.g., methods of teaching, materials to be used, content to be taught, techniques for evaluating progress of pupils, decoration and furnishing of the classroom, and handling pupil disturbances. Principals who attempt to make unilateral decisions in matters such as these will encounter resistance from teachers and eventually will alienate them. In determining whether the decision falls within the zone of indifference, the principal must first apply the test of *relevance* of the decision to those affected.

A second test which the principal can use to assess whether the decision is located in the teachers' zone of indifference is that of *expertise*.[13] Teachers are likely to be uninterested in considering matters quite outside their scope of experience and sphere of competence. To involve them in decisions which they are not qualified to make is to subject them to frustration. For an individual to be interested in participation, he must not only have some stake in the outcome but also the capability of contributing to the decision affecting the outcome. Both of these conditions must be met to some minimum extent if participation is to be effective. In this respect teachers would desire to be involved in prescribing the functions a foreign language laboratory should perform but be willing to leave decisions about the technical specifications of the laboratory to an electronics engineer.

In some instances a principal will be faced with decisions in which his staff has little, if anything, at stake, but for certain reasons it is advisable to involve his teachers in discussing the problem and thinking through the issues involved. An instance of this type might have to do with a decision about the attendance accounting procedures used by teachers. In this case, the principal might wish to involve his teachers in thinking through the problem and the various issues because their *acceptance* is required for the decision to be implemented in an effective manner. The principal in such instances feels that it is critical for teachers to develop a thorough understanding of the implications of the decision. Many barriers to the implementation of the decision are removed through this procedure. Other decisions may be of such import to the principal that he may wish to obtain the judgments of teachers or their assistance in piecing together the information available to him in order to *reach a higher quality decision*. In either of these instances, the principal is asking the teachers to discuss issues which are in their zone of indifference and if done indiscriminately could lead to alienation.

ROLE OF TEACHERS IN THE DECISION-MAKING PROCESS

In addition to determining whether his teachers should be involved in making decisions, the principal must also decide at what phase in the decision-making process teachers will be included and what their role will be. This decision is an important one because it establishes the amount of freedom which the teachers have in the decision-making process, a fact that principals oftentimes do not recognize. An examination of the decision-making process and the role teachers might play should make this point clear.

Decision making, according to Tannenbaum, involves a conscious selection of one alternative from among a group of two or more alternatives.[14] In reaching a decision, a person typically (1) defines the problem, (2) generates a number of action alternatives which are relevant to the problem, (3) specifies the consequences related to each alternative being considered, and (4) exercises a

choice among the alternatives.[15] These four steps constitute one conception of the decision-making process.

At the problem-definition phase the principal can choose to (a) specify what objective is to be attained and (b) pinpoint what he perceives to be the barriers blocking attainment of the objective,[16] do (a) but not (b), do (b) but not (a), or neither (a) or (b). For example, the principal may have access to the following information: students who take foreign language in his high school and continue their study of the language in college do poorly. He further knows that the emphasis in college is on the ability to converse in the language while at the high school level his teachers emphasize the ability to read and write the language. At this step in the decision-making process he can choose to ignore the information, to use it as a basis for defining the problem, or to report the information to his staff. If he elects to use it in defining the problem, he can establish the objective (e.g., change to the oral-aural approach to foreign language instruction) and specify the barriers which must be overcome (e.g., oral-aural skills of instructors and language laboratory for students to practice conversational skills) if the objective is to be achieved. He may, on the other hand, decide on the objective and seek from the teachers their perceptions of the barriers to the realization of this objective. A third alternative open to the principal at the problem-definition stage is that of reporting the information to his teachers and asking them to formulate the objective suggested by the data, reserving for himself the identification of the barriers. The fourth and final course of action which is possible is that of passing the information to the teachers and requesting them to define the problem (both the objective and the barriers) if they feel there is one. The principal who permits his staff to decide whether there is a problem and to define both the objective and barriers is allowing his teachers more freedom than the principal who defines the problem or some aspect of it (i.e., either the objective or the barriers).

In step 2 of the decision-making process, the principal can develop his own list of action alternatives suggested by the definition of the problem or call upon his teachers to develop a list of alternatives. Having spelled out the alternatives, the principal in step 3 of the process may elect to speculate on the consequences associated with each alternative or share this task with his staff. The principal can then narrow or expand his teachers' area of freedom by choosing or not choosing to involve them in steps 2 and 3 of the decision-making process. From the teachers' viewpoint, this is an important distinction. To continue with the foreign language illustration, the teachers might be willing to experiment with a language laboratory (one alternative) provided they can spend a summer at a language institute becoming familiar with the operation of a laboratory and developing their own oral-aural skills (a consequence of selecting the language laboratory alternative). The consequences of any given alternative are likely to be more apparent, after all, to the person affected by the course of action than to the individual making the decision, assuming the two are not the same.

When the problem has been defined, the alternatives listed, and the consequences for each alternative posted, a choice must be made from among the alternatives. At this point, the final step in the decision-making process, the principal may weigh the alternatives and consequences and select what he considers to be the appropriate course of action, ask his teachers to recommend the alternative which they prefer, or commit himself in advance to whatever choice they make.

The steps in the decision-making process in which teachers are involved, as well as whether they will play a recommending or determining[17] role in the final step, depend upon the teachers' zone of indifference and the area of freedom granted to the principal by his superiors. If the decision to be made is clearly outside the teachers' zone of indifference, maximum freedom can be allowed the teachers in all phases of the decision-making process as long as they do not exceed the area of freedom granted to the principal. In the foreign language example, the principal, if he lacks the authority or funds to implement the teachers' decision to experiment with a language laboratory, would need to restrict the teachers' choice to a recommendation. In matters which fall within the teachers' zone of indifference, the principal might simply solicit alternative courses of action and their consequences to whatever problem he has defined, reserving the final choice of action for himself. Regardless of the route which the principal takes, it is important for him *to make quite clear to the teachers the boundaries of their authority and the area of freedom in which they can operate.* Vague authority, it seems, restricts thinking and results in unimaginative problem-solving behavior.[18]

CONSTITUTING THE DECISION-MAKING GROUP

Once the principal has determined whether the decision is one which should be shared with his teachers, decided in what phase of the decision-making process they will be involved, and what their role will be, he must constitute the decision-making group. This involves determining the *"constitutional arrangements"* of the group[19] and whether he, the principal, will be an active member in the group's deliberations. The three major types of constitutional arrangements are the participant-determining, the parliamentarian, and the democratic-centralist; these arrangements specify the procedures by which the group is to arrive at a decision.[20] Each of these is defined primarily in terms of the number of group members required to be in agreement to reach a decision and the amount of influence any given group member can theoretically exert over the decision. For example, in groups using either the participant-determining or parliamentarian modes for reaching decisions, every group member has relatively equal power and influence over the decision. The major distinction between these modes on the influence-agreement dimensions is that under the participant-determining arrangement consensus is required. Groups using

parliamentarian procedures for making and executing decisions can exercise a choice which is binding on the group whenever a majority agrees that a particular course of action is desirable. As for groups operating under a democratic-centralist constitutional arrangement, they are bound by a decision whenever one is reached by the person in final authority (in this case the principal). It should be quite clear, then, that the principal can expand or restrict his teachers' area of freedom by the constitutional arrangement he chooses as well as by involving them in the earlier or later stages of the decision-making process. Unfortunately, there has been no systematic research which can serve as a guide to the principal in making his selection; therefore, any discussion of constitutional arrangements as being more appropriate for one set of conditions than for another must be purely speculative.

Decisions that seemingly would be appropriate for a participant-determining mode would be those falling clearly outside the teachers' zone of indifference, i.e., decisions in which teachers have a high personal stake and the expertise to resolve, and for which complete agreement is imperative. If, returning to the example of the foreign language laboratory, the principal decides that he will not authorize the purchase of such expensive electronic equipment unless there is total consensus, then he may stipulate that the teachers must use the participant-determining mode for reaching their decision. In most instances where consensus is necessary and feasible and the decision is relevant to the teachers' future, the principal may wish to press them for total agreement. These occasions should be few, however, as consensus, especially when sought in the presence of resolvable conflict, can be a time-consuming, high energy expenditure process. In those instances where the principal senses that the issue to be decided is important in the lives of the teachers but affects them differently, and consensus is, therefore, high unlikely,[21] he may choose the parliamentarian style. If he does elect this latter arrangement, he must take steps to assure that the majority does not alienate the minority, especially if the minority's acceptance of the decision is required for it to be implemented effectively. A faculty with a stable clique which consistently votes as a block could doom the parliamentarian style. The conditions under which this style is most effective are those where individuals who are in conflict on one issue are likely to be allies on another.[22] Unless this condition exists, the style could place a permanent wedge between factions and lead to open warfare each time a decision was needed. The democratic-centralist mode is the one most commonly used today in organizations of all types--business concerns, mutual benefit associations, service organizations, and commonwealth organizations.[23] Under this constitutional arrangement, the leader (in this case the principal) presents a problem to his subordinates (the teachers) and asks for their judgments, suggestions, and reactions before he reaches *his* conclusion. This *modus operandi* would be the only alternative in those instances where the principal is the one who must legally make the decision. Other occasions in which this style would seem appropriate would be those where the decision is clearly the principal's but he wishes to lower his staff's resistance by gaining its acceptance or to improve the quality of the decision by gaining his teachers' ideas.

So much for the constitutional arrangements of the group. What about the principal's decision to be a member of the group? Do groups function the same when there is a difference in the formal status of group members (principal and teachers) as when there is no difference in the formal status of group members (teachers only without the principal)? A study by Bridges and Doyle[24] was concerned with this very question. They randomly selected seven teachers from each of ten elementary schools. Three teachers from each school were randomly assigned to a group with their principal while the other four were placed in a group by themselves. All twenty groups, ten with the principal present and ten without the principal present, were given the same problem to solve. The groups without the principal present were significantly more productive and efficient and showed a significantly greater amount of risk-taking behavior than those groups in which the principal was a group member. In this particular study, a parliamentarian mode of decision making was used; whether the findings would be replicated under participant-determining and democratic-centralist formats has not been examined.

Torrance studies the consequences of power differences on decision-making among B-26 combat crews[25] using an unspecified constitutional arrangement. He found that the suggestions of lower status members of the crew were often passed over despite the fact that the lower status members had many more correct solutions! As decisions having no right or wrong answers were solved by the group, the influence of low formal status persons declined even more dramatically. This is no problem if the higher status members are capable of making the most creative decisions. On the other hand, if such ability is not possessed by the persons with higher organizational status, there is indeed quite a problem.

THE PRINCIPAL AS A FACILITATOR OF GROUP FUNCTIONING

The research of Bridges, Doyle, and Torrance was cited not to suggest that the principal should avoid meeting with his teachers to make decisions since group decision-making is the warp and woof of organizational life. More important than whether the principal should be involved in these group processes is the question of what the principal can do to facilitate the group's decision-making efforts when he joins the group. The group leader is in a unique position to perform certain functions which are essential to the group's deliberations; this section will deal with these functions in some detail by making frequent references to the preceding discussions.

If the principal elects to follow the parliamentarian mode for reaching decisions, one of his major functions is to provide the minority with the opportunity to state its position fully. Maier has demonstrated empirically that the quality of the group's decision is higher when the leader enables the minority to voice its views during the problem-solving session.[26] Typically the only way that the minority can sway the majority to another viewpoint is through supplying facts to support the minority's opinions which the majority has

overlooked. Without a leader present to elicit the minority viewpoint, the minority because of social pressures is generally not offered time for discussion, a factor which may downgrade the quality of group decision-making.

Should the principal use the participant-determining style, one of his chief contributions resides in his efforts to build consensus. There is a tendency for discussions to become polarized with one part of the group opposing the other. In such cases, groups see clearly in what ways their arguments are different but *fail to recognize* the similarities.[27] The leader may guide the factions to see these similarities and possibly use them as a basis for building toward consensus. If two positions have been taken, the principal can get the group to pinpoint the advantages of each and seek to integrate their views by developing a third alternative which includes the major advantages of both.[28] Not finding a third alternative, the principal can do one of two things: suggest that both be tried on an experimental basis or treat the disagreement *as a problem* and seek the obstacles to consensus.

The third constitutional arrangement proposed was the democratic-centralist. Since it is likely to be used more frequently, a number of ideas will be introduced in connection with this mode. The reader will quickly see the points which also would be relevant to the other two arrangements. Perhaps the biggest pitfall to be avoided in the democratic-centralist mode is the tendency of the group's thinking to conform to the leader's.[29] The leader can minimize the negative effects, if not eliminate them completely, by focusing on the problem-solving process rather than by trying to solve the problem himself. The leader can further contribute to the quality of the group's decision by synchronizing its efforts so that the group is concentrating its thoughts on the same aspect of the problem at the same time.[30] For example, one of the obstacles to problem solving is the likelihood that individual group members may be trying to solve different problems. Initially the principal may have the group attend to the definition of the problem--obtaining agreement on the objective before proceeding to speculating about the barriers to the objective. Then in turn the group might focus on alternative courses of action following by examining the consequences for each alternative. In following this strategy, the leader should delay the participants' desire to generate solutions until the list of obstacles has been clearly spelled out.

As was mentioned earlier in the study by Bridges and Doyle, there was significantly less risk-taking behavior with the principal present. Argyris in his study of inter-personal barriers to decision making in Research and Development organizations reported the same phenomenon.[31] He suggests that executives (in this case principals) can increase risktaking by subordinates by withholding evaluation and criticism of proposals and by avoiding a show of surprise when unusual ideas come forth from the group. The leader's responsibility, Argyris writes, is to minimize the penalties associated with the free open expression of *both ideas and feelings*.

Still another way to facilitate a group's functioning is for the leader to look for factors which create binds for the group. One possibility would be for the principal periodically to ask his teachers to think back during the meeting and describe when they felt the group was stumbling along or not progressing as it should and then to identify the conditions which they thought were responsible for this. A second possibility might involve taping group sessions and playing them back so the principal and teachers could become aware of their impact on one another and see the binds each was creating for the other.[32]

Where the foregoing ideas have as their major objective the upgrading of the quality of decisions, there are occasions when the principal's major objective will be to gain acceptance for whatever action he is contemplating. In these instances, he might simply use the *"risk technique."*[33] This strategy would involve the group in considering the risks or dangers likely to develop if a given course of action is taken. In this way, teachers would have the opportunity to express their fears, anxieties, and concerns before the action was taken. This would not only provide the principal with some idea of the resistance he would encounter, but also would provide him with an opportunity to supply additional information to teachers which hopefully would create a climate of acceptance for the action being taken.

SUMMARY

Much of the principal's time will be spent in small decision-making groups on matters central to the functioning of the school. This paper was designed to point up the importance of shared decision making, the conditions under which it seems appropriate, the steps of the decision-making process in which participation is possible, the ways in which the group can be constituted for purposes of decision making, and finally the role the principal can take to upgrade the quality of the group's efforts and to promote acceptance of any given decision. These are not the only matters which might have been discussed; however, in the author's opinion, they are the most important. A thorough understanding of these factors is required of the principal who expects to assume a position of leadership on his faculty--a role which is now more than ever an organizational imperative!

FOOTNOTES

1. L. Coch and J. R. P. French, Jr., "Overcoming Resistance to Change," *Human Relations*, 1, No. 4, 1948, 512-32.

2. Robert H. Guest, *Organizational Change: The Effect of Successful leadership*. Homewood, Illinois: The Dorsey Press, Inc., 1962.

3. Victor H. Vroom, *Some Personality Determinants of the Effects of Participation*. Englewood Cliffs: Prentice Hall, Inc., 1960.

4. N. R. F. Maier and R. A. Maier, "An experimental Test of the Effects of 'Developmental' vs. 'Free' Discussions on the Quality of Group Decisions," *Journal of Applied Psychology*, 1957, 41, 320-323.

5. R. F. Wickert, "Turnover and Employees Feelings of Ego-involvement in the Day-to-Day Operations of a Company," *Personnel Psychology*, IV, 1951, 185-197.

6. Francis S. Chase, "The Teacher and Policy Making," *Administrator's Notebook*, Vol. I., (May, 1952).

7. Chiranji Lal Sharma, "Who Should Make What Decisions?" *Administrator's Notebook*, Vol. III, No. 8 (April, 1955).

8. Edwin M. Bridges, "Teacher Participation in Decision Making," *Administrator's Notebook*, Vol. XII, No. 9 (May, 1964).

9. Chase, *op. cit.*

10. Bridges, *op. cit.*

11. Chester Barnard, *The Functions of the Executive*. Cambridge, Massachusetts: Harvard University Press, 1938.

12. Robert Blake and Jane Mouton, *The Managerial Grid*. Houston: The Gulf Press, 1964.

13. Robert Tannenbaum and Fred Massarik, "Participation by Subordinates in the Managerial Decision-Making Process," *Reprint No. 14*, Los Angeles: University of California Institute of Industrial Relations.

14. Robert Tannenbaum, "Managerial Decision-Making," *Reprint No. 9*, Los Angeles: University of California Institute of Industrial Relations, pp. 23-24.

15. *Ibid.*

16. The author wishes to acknowledge Frederick W. Lighthall, Associate Professor of Educational Psychology, The University of Chicago, as the source of this idea.

17. Thomas R. Bowman, "Participation of Superintendents in School Board Decision Making," *Administrator's Notebook*, Vol. XI, No. 5 (January, 1963).

18. S. Epstein, *An Experimental Study of Some of the Effects of Variations in the Clarity and Extent of a Supervisor's Area of Freedom Upon His Supervisory Behavior.* Doctoral Dissertation, University of Michigan, Ann Arbor, Michigan, 1956.

19. Guy E. Swanson, "The Effectiveness of Decision-Making Groups," *Adult Leadership*, Vol. 8, No. 2 (June, 1959), 48-52.

20. *Ibid.*

21. James S. Coleman, *Community Conflict.* Glencoe, Illinois: The Free Press (A publication of the Bureau of Applied Social Research, Columbia University, 1957).

22. Swanson, *op. cit.*

23. Peter S. Blau and Richard M. Scott, *Formal Organizations*, San Francisco: Chandler Publishing Co., 1962.

24. Edwin M. Bridges and Wayne J. Doyle, "The Effects of a Power Figure on Group Productivity, Efficiency, and Risk-Taking." (Manuscript in preparation).

25. E. Paul Torrance, "Some Consequences of Power Differences on Decision Making in Permanent and Temporary Three-Man Groups," *Small Groups* (ed.) A. Paul Hare, Edgar F. Borgatta, and Robert F. Bales. New York: Alfred A. Knopf, 1955, pp. 482-492.

26. Norman R. F. Maier and Allen R. Solem, "The Contribution of a Discussion Leader to the Quality of Group Thinking: The Effective Use of Minority Opinions," *Group Dynamics* (ed.) Dorwin Cartwright and Alvin Zander. Evanston: Row, Peterson, and Co., 1953, pp. 561-572.

27. Herbert A. Shephard, "Responses to Situations of Competition and Conflict," *Power and Conflict in Organizations* (ed.) Robert L. Kahn and Elise Boulding. New York: Basic Books, Inc., Publisher, 1964, pp. 127-135.

28. Norman R. F. Maier, *Problem Solving Discussions and Conferences.* New York: McGraw Hill Book Company, Inc., 1963.

29. *Ibid.*

30. *Ibid.*

31. Chris Argyris, "Interpersonal Barriers to Decision-Making," *Harvard Business Review*, Vol. 44, No. 2 (March-April, 1966), 84-97.

32. *Ibid.*

33. Norman R. F. Maier, *Problem-Solving Discussions*, *op. cit.*